

ABSTRACT OF THE DISCLOSURE

The present invention provides a surface wave acoustic element which has a large surface acoustic wave propagation velocity and can be used in high-frequency regions by using a hard layer other than diamond which has inferior surface flatness. This surface acoustic wave element has a sapphire single crystal substrate, a hard layer formed on the sapphire single crystal substrate and having a composition containing $(Al_{1-x}M1_x)_2O_3$ ($0 \leq x \leq 0.5$) in which at least one element M1 (M1 = B, Ga, In, Ti, V, Cr, Mn, Fe, Co) is added to sapphire, and a piezoelectric layer formed on the hard layer.

0963457, 121801